

Application No.: 10/798,886

REMARKS

Claims 1-9 are pending with claims 1-4, 6 and 8 being independent. Claims 1-3 are directed to a "component of a crank mechanism" which have the specified characteristics of a hydrogen content of no more than 0.5 ppm, austenite grains having a grain size number exceeding 10, and fracture stress value of no less than 2650 MPa, respectively. Claims 4, 6 and 8 identify the component as a bearing in a crank mechanism having the aforementioned characteristics.

Claims 1-3 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ohki '769 ("Ohki"). This rejection is respectfully traversed for the following reasons.

As a preliminary matter, it is noted that the Examiner does not provide any discussion of the alleged relevance of Ohki to the present application, but merely concludes that Ohki anticipates claims 1-3. Accordingly, it is respectfully submitted that the pending rejection is *per se* improper because the Examiner simply makes a general statement that Ohki anticipates each and every limitation recited in claims 1-3 without identifying any portions of Ohki, as the Examiner is required to do, to support his allegation. In imposing a prior art rejection, the Examiner is required to point to "page and line" wherein an applied reference is perceived to identically disclose *each* feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). Nonetheless, upon Applicants' review, it is respectfully submitted that Ohki does not identify the disclosed rolling bearings with

Application No.: 10/798,886

the aforementioned characteristics being used *as part of a crank mechanism as claimed*. That is, Ohki does not disclose a crank mechanism.

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Murakami et al. '335 ("Murakami"), and claims 2 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Takemura et al. '688 ("Takemura"). These rejections are respectfully traversed for the following reasons.

Similarly to the deficiency of Ohki discussed above, neither Murakami nor Takemura identify the disclosed machine part/rolling bearing as being used as part of a crank mechanism as claimed. That is, neither Murakami nor Takemura discloses a crank mechanism.

Further, neither Murakami nor Takemura discloses the alleged component having a nitriding layer, let alone one formed by a carbonitriding process as claimed. Regarding the "carbonitriding" limitation, the Examiner is directed to MPEP § 2113, which sets forth the applicable standard for giving patentable weight to process limitations presented in an apparatus claim:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)

In the instant case, it is respectfully submitted that the *nitriding layer* formed by a carbonitriding process *structurally* distinguishes over Murakami and Takemura, whereby distinctive structural characteristics are imparted, so that the Examiner must give patentable thereto.

Application No.: 10/798,886

Even further, with regard to claim 3 (and claim 8), the Examiner has effectively taken the position that both Murakami and Takemura *inherently* disclose components having a fracture stress value of no less than 2650 MPa notwithstanding the absence of any explicit disclosure thereof. However, as is well known in patent prosecution, "inherency may not be established by probabilities or possibilities," *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999). The Examiner's basis for asserting inherency lies in the alleged similarity in the disclosed materials making up the prior art components and that disclosed in Applicants' specification. However, notwithstanding any alleged similarities in material composition, the prior art devices do not necessarily have a fracture stress value of no less than 2650 MPa as discussed below, so as to rebut the Examiner's inherency position.

For example, as shown in Table 1 in Applicants' specification (page 18), a fracture stress value of not less than 2650 MPa can be obtained by using the heat treatment pattern shown in Fig. 5 of Applicants' specification during the carbonitriding process. On the other hand, the fracture stress value of not less than 2650 MPa would NOT be obtained, *even with the same composition*, if a different heat treatment pattern is used for the carbonitriding process as evidenced by the "conventional carbonitrided sample" in Table 1 of the present application.

Accordingly, even assuming *arguendo* that the compositions of Murakami and Takemura are identical to that of the present application, because the steel materials of Murakami and Takemura are not subjected to the carbonitriding process, it is not inherent that a fracture stress value of not less than 2650 MPa would be obtained

Regarding claims 4, 6 and 8 which identify the component specifically as a bearing in the combination of a crank mechanism having the aforementioned characteristics, the Examiner

Application No.: 10/798,886

relies on Fujiwara et al. '398 as a conventional bearing utilized in a crank mechanism. The Examiner then modifies Fujiwara et al. '398 under 35 U.S.C. § 103 with the disclosed component characteristics disclosed by Murakami and Takemura in an attempt to reach the claimed invention. However, for the reasons discussed above, neither Murakami nor Takemura discloses a nitriding layer formed by carbonitriding. Accordingly, even assuming *arguendo* proper, the proposed combination would not disclose or suggest a nitriding layer formed by the carbonitriding process even if the steel material of Murakami or Takemura is incorporated into the support structure of the alleged crank mechanism shown in Fujiwara et al. '398.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that the cited prior art does not anticipate any of the pending claims. The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejections do not "establish *prima facie* obviousness of [the] claimed invention" as recited in the pending claims because the proposed combinations fail the "all the claim limitations" standard required under § 103.

Application No.: 10/798,886

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102/103 be withdrawn.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,
McDERMOTT WILL & EMERY LLP


Ramyar M. Farid
Registration No. 46,692

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 RMF:MaM
Facsimile: 202.756.8087
Date: June 7, 2006

Please recognize our Customer No. 20277 as
our correspondence address.